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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/188,399 11/06/98 BODDY

M 256.029US1

021186 TM02/0911
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EXAMINER

GARLAND, S	
ART UNIT	PAPER NUMBER

2121
DATE MAILED:

09/11/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/188,399

Applicant(s)

BODDY ET AL.

Examiner

Steven R Garland

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 1999 and 13 November 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 20-26,30 and 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11,13-19,27-29 and 32-34 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.5. 6) ☐ Other: _____

DETAILED ACTION

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-19,27-29, and 32-34, drawn to scheduling tasks, classified in class 700, subclass 103.
 - II. Claims 20-26, 30, and 31, drawn to handling constraints, propagating constraints, and identifying culprits, classified in class 700, subclass 33.
2. The inventions are distinct, each from the other because:
3. Inventions of Group I, claims 1-19,27-29, and 32-34 , and of Group II, claims 20-26,30, and 31, are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention Group I has separate utility such as scheduling tasks with preset constraints. See MPEP § 806.05(d).
4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
5. During a telephone conversation with Mr. Shudy on 6/5/01 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-19,27-29, and 32-34. Affirmation of this election must be made by applicant in replying to this Office action. Claims 20-26,30, and 31 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one

or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

7. The disclosure is objected to because of the following informalities: claim 21 lacks an ending period..

Appropriate correction is required.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

9. Claims 1-3,5-8,10,11,13-19, and 32-34 are rejected under 35 U.S.C. 102(b) as being anticipated by the Goldman et al. article " A Constraint-Based-Scheduler for Batch Manufacturing" (copy supplied by applicant) .

Goldman et al. teaches constraint based scheduling using discrete and continuous constraints, determining infeasible schedules, breaking tasks into activities and subactivities, use of deadlines, identifying required resources, dynamic backtracking, schedule modification, use of solver engines, etc. See pages 49-56 and note figures 1 and 2.

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over by the Goldman et al. article " A Constraint-Based-Scheduler for Batch Manufacturing" (copy supplied by applicant).

Goldman et al. teaches everything except specifically storing the software on a medium.

It would have been obvious to one of ordinary skill in the art to modify Goldman to store the software on a medium as a backup copy in case the system crashes and also allow for easily loading the software on system startup.

13. Claims 1-11, 14,15,19,27-29,33, and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Zweben et al. 6,216,109.

Zweben et al. teaches constraint based scheduling using continuous and discrete constraints, use of a memory to store the software, use of deadlines and start

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and end times, splitting tasks into subtasks, identifying required resources to perform a task, resource balancing, identifying infeasibilities, schedule modification, etc. See the abstract, figures, col. 1, lines 39-65; col. 2, lines 1-6; col. 9, lines 30-47; col. 14, lines 6-42; col. 15, line 33 to col. 16, line 61; col. 25, line 45 to col. 26, line 58; and the claims.

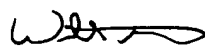
14. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Elad et al. 5,195,172 and Tanaka 5,353,229 are of interest in the use of constraints.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven R Garland whose telephone number is 703-305-9759. The examiner can normally be reached on Monday-Thursday from 6:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Grant, can be reached on (703) 308-1108. The fax phone number for the organization where this application or proceeding is assigned is 703-746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-3900.


WILLIAM GRANT
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100
9/2/01